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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,741	08/01/2003	John Frederick Ackerman	RD-26408-5	3858

7590
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08/16/2007

EXAMINER

PERRIN, JOSEPH L

ART UNIT	PAPER NUMBER
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1746

MAIL DATE	DELIVERY MODE
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08/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/632,741	Applicant(s) ACKERMAN ET AL.	
	Examiner Joseph L. Perrin, Ph.D.	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,7,9-12 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,7,9-12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 30 July 2007 has been entered.

Response to Arguments

2. In view of the Board decision, the rejections under 35 USC §112, first paragraph, have been withdrawn. The scope of the claims regarding what is meant by "anti-static liquid" has been given the broadest reasonable interpretation consistent with the original disclosure as filed and as interpreted on the record with respect to the intended use of such liquids in apparatus claims.

3. Applicant's arguments with respect to the amendment filed 30 July 2007, with respect to the rejection over HODGENS have been fully considered and are persuasive. The §102 rejection over HODGENS has been withdrawn.

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4. Applicant's arguments with respect to the rejections over BARTOS have been fully considered but they are not persuasive. Applicant argues that BARTOS does not disclose the newly added limitation of "a plurality of spray nozzles coupled to a ring manifold, said plurality of spray nozzles are circumferentially spaced about the gas turbine engine ...". Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Manifestly, BARTOS discloses a ring-shaped manifold (96) having nozzle orifices for directing treatment fluid into the turbine engine (see Figure 6). Such structure reads on applicant's claimed structure (one having ordinary skill would immediately recognize the inward spraying pattern of the nozzles spraying radially inwardly). Applicant readily acknowledges such spray ring structure disclosed in BARTOS (see pages 7-8 of the instant response) but does not specifically point out how the claimed structural limitations patentably distinguish from BARTOS. The only potential difference between the claimed apparatus and that of BARTOS is how the ring and nozzles are construed. While the Examiner takes the position that the claimed structure is readable on BARTOS and does not patentably distinguish over the apparatus of BARTOS, even if *arguendo*, one were to construe the claimed structure as requiring removable/adjustable nozzles which connect to the ring manifold to spray at different angles the position is taken that the prior art is replete with nozzle assemblies on such ring manifolds and the substitution of such known functional equivalent nozzles onto the ring manifold of BARTOS would have been an obvious modification to one

having ordinary skill in the art and would have yielded the predictable results of controlling the spraying of treatment fluid from a ring manifold into a turbine.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 6-7, 9-12 & 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative as being obvious over U.S. Patent No. 4,059,123 to BARTOS (previously cited). BARTOS discloses the claimed structure of a turbine engine cleaning machine (10) including a pump (compressor 14), fluid reservoirs (18/20/22/24), and nozzle manifold (96) (see Figures 1, 2, 6, and relative associated text). As noted above, the non-enabling disclosure of "anti-static liquid" is construed to read on a coating liquid which would be capable of reducing the rate of formation of particulate matter, and the intended use of types of fluids used and operation of the apparatus are given little weight (see above). Accordingly, since the preservative coating of BARTOS would be capable of reducing the rate of formation of particulate matter (*i.e.* a coating would achieve this since the coating would prevent adhesion of particles to, for instance, a gas turbine), the apparatus of BARTOS reads on applicant's claimed apparatus. Recitation of BARTOS reads on applicant's claimed invention.

7. Claims 6-7, 9-12, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,944,483 to BECK et al. ("BECK"), as evidenced by HODGENS and BARTOS. BECK

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discloses an apparatus having a plurality of spray nozzles (11) on ring manifold (13) which are circumferentially spaced around an opening of turbine (1) and configured to spray a first fluid and second fluid radially inward via fluid lines (19/20). Regarding the claimed fluid reservoirs and pump, the position is taken that such structure is common knowledge in the art (as evidenced by the disclosures of HODGENS and BARTOS, *supra*) and one having ordinary skill in the art would have at once envisaged the fluid sources of the apparatus of BECK including reservoirs and a pump which store and supply fluids to be sprayed. Even if, *arguendo*, one were to take the position that such is not common sense to one having ordinary skill in the art and is not inherently or implicitly taught it would have been obvious to connect reservoirs and pumping means (as disclosed by HODGENS and BARTOS) to the fluid lines (19/20) of BECK to yield the predictable results of controllably supplying a first and second fluid to the spray nozzles of BECK. Moreover, there would have been a reasonable expectation of success in combining the references to yield the claimed invention since they are analogous in the turbine art.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 6-7, 9-12 & 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,273,395 to MCDERMOTT in view of HODGENS (previously cited). MCDERMOTT discloses an apparatus for cleaning a gas turbine

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engine (2) comprising a washing system using a plurality of spray nozzles (6/8/10/12/14/16/18) circumferentially spaced around manifold ring (20), the nozzles oriented to spray radially inward from the ring manifold (see entire document, for instance, Figures 1-2 and relative associated text). While MCDERMOTT discloses using a fluid reservoir (40) and pressurizing the reservoir to pump the cleaning fluid from the reservoir to the nozzles, MCDERMOTT does not expressly disclose first and second reservoirs. HODGENS teaches that it is known in the turbine cleaning art to provide two fluid reservoirs (12/13) in a turbine cleaning system in which the fluids are pumped to a nozzle assembly for washing a turbine (see Figures 3-4 and relative associated text). Because both MCDERMOTT and HODGENS teach washing turbine engines by pressurizing fluid from a reservoir to a spray nozzle, it would have been obvious to one skilled in the art to substitute a single fluid reservoir for two fluid reservoirs to achieve the predictable result of applying plural and different treatment fluids (i.e. washing, rinsing, coating and the like) to optimize the treatment effect.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 4,834,912 to HODGENS, II et al. & U.S. Patent No. 4,196,020 to HORNAK et al., each disclosing apparatuses, methods and compositions for spray cleaning turbine engines.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is

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(571) 272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Joseph L. Perrin, Ph.D.
Primary Examiner
Art Unit 1746

JLP